

# Personal Use of Complementary and Alternative Medicine (CAM) by U.S. Health Care Workers

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**Objective.** To examine personal use of complementary and alternative medicine (CAM) among U.S. health care workers.

**Data.** Data are from the 2007 Alternative Health Supplement of the National Health Interview Survey. We examined a nationally representative sample of employed adults ( $n = 14,329$ ), including a subsample employed in hospitals or ambulatory care settings ( $n = 1,280$ ).

**Study Design.** We used multivariate logistic regression to estimate the odds of past year CAM use.

**Principal Findings.** Health care workers are more likely than the general population to use CAM. Among health care workers, health care providers are more likely to use CAM than other occupations.

**Conclusions.** Personal CAM use by health care workers may influence the integration of CAM with conventional health care delivery. Future research on the effects of personal CAM use by health care workers is therefore warranted.

**Key Words.** Complementary and alternative medicine, health care workforce, National Health Interview Survey

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The prevalence of complementary and alternative medicine (CAM) therapies, defined as therapies that are “not generally considered part of conventional medicine” (National Center for Complementary and Alternative Medicine 2007) is substantial and has grown since the early 1990s in the United States (Goldstein 2002). Eisenberg et al. examined 1990 national survey data about CAM use and found that 34 percent of U.S. adults “reported using at least one unconventional therapy in the past year, and a third of these saw providers for unconventional therapy” (Eisenberg et al. 1993). Data from a 1997 follow-up survey revealed an 8 percent increase in those who reported using at least one

unconventional therapy in the past year and a 10 percent increase in those who reported seeing a provider for unconventional therapy (Eisenberg et al. 1998; Wolsko et al. 2002). More recent studies indicate that the prevalence of CAM use, although substantial, has increased for only a few therapies since 1997 (Tindle et al. 2005; Barnes, Bloom, and Nahin 2008). For example, a study using data from the 2007 National Health Interview Survey (NHIS) found that approximately 40 percent of adults used CAM therapies in the past year. However, when compared with 2002 NHIS data, only the prevalence of “acupuncture, deep breathing exercises, massage therapy, meditation, naturopathy, and yoga showed significant increases” (Barnes, Bloom, and Nahin 2008).

Increasingly, CAM therapies are being integrated with conventional medicine. According to the American Hospital Association's Annual Survey of Hospitals, the percentage of hospitals offering CAM has increased from 7.9 percent in 1998 to 19.8 percent in 2006 (Ananth 2009; Henkel 2010). The widespread and growing consumer demand for CAM in the U.S. led Wyatt and Post-White (2005) to write that conventional “health care must now catch up with consumer practices to provide guidance in the safe and effective use” of CAM. Cornman, Carr, and Heitkemper (2006) worried about missed benefits of unused CAM and possible adverse reactions of CAM when misused, contending that all health care workers should “possess knowledge regarding the assessment of CAM use”. Thus, it is not surprising that, over the past two decades, inclusion of CAM education has increased in medical schools (Wetzel, Eisenberg, and Kaptchuk 1998; Wetzel et al. 2003) and nursing schools (Fenton and Morris 2003; Helms 2006).

Although researchers have documented the knowledge and attitudes of health professionals about CAM (Astin et al. 1998; Brown et al. 2007; Sewitch et al. 2008; Rojas-Cooley and Grant 2009), few studies have investigated personal CAM use among those working in health care, and the existing studies focus on small, specialized practitioner populations. To date, no study has taken a population approach to CAM use among health care workers. Given the prevalence of CAM use in the general population, evolving research that

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supports the effectiveness of specific CAM therapies (Astin 2004; Furlan et al. 2008; Linde et al. 2009), the need for health care workers to provide safe and effective treatments to patients, and the importance of having a healthy health care workforce, this lacuna in research is not acceptable. Accordingly, the present study uses nationally representative survey data to examine the types of CAM therapies health care workers in the United States personally use, their reasons for using CAM, and the differences in CAM use across health care occupations. To provide context, we also compare CAM use among health care workers to CAM use in the rest of the employed population.

## METHODS

### *Sample*

We examined personal CAM use by workers employed in hospitals and ambulatory care settings (hereafter, "health care workers") using the most current nationally representative data available on complementary and alternative health practices, National Health Interview Survey (NHIS) data from 2007 (National Center for Health Statistics, 2008a). The NHIS is an annual household survey of the health and health care of the U.S. noninstitutionalized, civilian population (Gentleman and Pleis 2002). The NHIS uses a multistage probability sample design with clustering and stratification (National Center for Health Statistics, 2008b). The sample is drawn, so that data analyzed using the sampling weights are representative of the U.S. population. The 2007 NHIS household response rate was 87.1 percent. Our analytic sample included adults, ages 18 and older, who reported being employed in the previous week ( $n = 14,329$  unweighted), with primary analyses restricted to those employed in a hospital or ambulatory care setting ( $n = 1,280$  unweighted).

To identify health care workers, we used data on respondents' self-reported main occupation during the week prior to their interview. We defined occupational groups using the three categories identified in the NHIS data, with a residual category for all other workers. The categories identified were as follows: Health Diagnosing and Treating, hereafter "providers" (e.g., physicians, nurses), Health Technicians, hereafter "technicians" (e.g., lab technologists, sonographers), and Health Care Support, hereafter "support workers" (e.g., nursing aides, transcriptionists). The residual category was all Other Occupations, hereafter "other occupations" (e.g., management, secretaries, maintenance). We categorized the type of

health care workplace using two industry sub-types identified in the NHIS: Ambulatory Health Care (typically outpatient settings such as doctors' offices) and Hospitals.

### *Measures*

The three primary outcomes of interest were global measures of past year CAM use. Practitioner-based CAM indicates reported use of CAM therapies delivered by a CAM practitioner. Self-treatment with CAM indicates reported use of CAM therapies that are typically self-administered. Any CAM use combines the two and indicates reported use of any of the CAM therapies reported in the NHIS.

The NHIS asks about 36 specific types of CAM therapies (see Appendix 1). Although the National Center for Complementary and Alternative Medicine (NCCAM) recently revised its taxonomy of CAM therapies, we organized the 36 therapies using the CAM taxonomy recommended by the NCCAM at the time the NHIS data were collected: alternative medical systems, biologically based therapies, manipulative body therapies, mind-body therapies, and energy healing therapies (see Appendix 1) (Barnes, Bloom, and Nahin 2008). Guided by the manner in which the NHIS CAM use question was asked, we categorized each specific therapy as practitioner-based or self-treatment.

In the NHIS, reasons for using CAM therapies were elicited through yes/no questions asked for each therapy used in the past year. Respondents were asked whether each was used to improve energy, for general wellness, to enhance immune function, because medical treatment did not help, because medical treatment was too expensive, because it was recommended by a health care provider, or because it was recommended by friends or family. We aggregated "yes" responses for each of the seven reasons to create indicator variables representing each reason for using any type of practitioner-based therapy (e.g., practitioner-based therapy to improve energy), and indicator variables representing each reason for using any type of self-treatment (e.g., self-treatment to improve energy). Specific health conditions treated with CAM were also elicited from respondents reporting CAM use in the past year. Variables for 87 health condition categories for each of the therapies were available. We aggregated affirmative responses for each condition to create variables representing any type of practitioner-based CAM used to treat each condition and any type of self-treatment used to treat each condition.

We identified potential covariates by reviewing studies suggesting that CAM use varied across these characteristics (Bausell, Lee, and Berman 2001; Bair et al. 2002; Grzywacz et al. 2005; Pagan and Pauly 2005). Variables included gender, age group, race/ethnic group, nativity status, self-reported health status, insurance coverage status, and geographic region of residence.

### *Analysis*

First, we examined the extent to which background characteristics differed by industry and by occupational group. Next, we estimated the prevalence of past year use of CAM therapies among health care workers and other employed adults in the United States. We used cross-tabulations and design-based *F*-tests to test for differences. In three separate multivariate logistic regression models, we estimated the odds of any past year CAM use, the odds of practitioner-based CAM use, and the odds of self-treatment with CAM for health care workers compared with all other industries. We then restricted the sample to only health care workers and estimated the three models of CAM use by health care occupation and workplace. All models were adjusted for age, race/ethnicity, gender, nativity status, self-reported health status, insurance status, and geographic region. Finally, we estimated the weighted prevalence of reported reasons for using CAM and reported health conditions treated with CAM in the past year. All analyses were conducted with Stata statistical software (SE version 10) and accounted for the NHIS's complex sampling design (StataCorp, 2007).

## RESULTS

Table 1 shows background characteristics by industry for all employed adults and for the subsample of health care workers by occupational group and workplace. In the overall sample of employed adults, there are significant differences in all characteristics except geographic region. When restricted to only health care workers, there are no significant differences in nativity status or geographic region of residence, although there are statistically significant differences in the demographic composition of the occupational groups. Specifically, providers have higher proportions of males, non-Hispanic whites, hospital-based employment, insurance coverage, and excellent health status than any other group.

Table 1: Selected Characteristics (Weighted Percent) of Employed Adults by Industry by Occupation, NHIS 2007

	All Employed Adults			Health Care Industry Only					p-value
	Health Care Industry	All Other Industries		Health Care Provider	Health Care Technician	Health Care Support	All Other Workers		
Demographics									
Gender									
Female	76.4%	42.9%		70.5%	79.0%	88.9%	75.8%		0.001
Male	23.6%	57.1%		29.5%	21.0%	11.1%	24.2%		
Age group									
18–29 years	19.4%	25.1%	0.0022	12.9%	20.6%	33.6%	19.2%		<0.001
30–49 years	48.7%	46.9%		57.3%	49.7%	42.4%	43.8%		
50–64 years	28.4%	24.5%		27.3%	27.4%	21.9%	32.0%		
65+ years	3.5%	3.5%		2.6%	2.2%	2.2%	5.1%		
Race/ethnicity									
Non-hispanic white	69.0%	68.4%	<0.001	77.1%	62.6%	54.2%	69.8%		<0.001
Non-hispanic black	14.4%	10.9%		8.1%	20.1%	26.5%	13.3%		
Non-hispanic other	6.7%	6.3%		8.9%	6.8%	5.7%	5.3%		
Hispanic	10.0%	14.5%		5.9%	10.5%	13.7%	11.7%		
Nativeity status									
Foreign-born	14.2%	17.3%	0.010	16.5%	11.6%	16.7%	12.4%		0.176
U.S.-born	85.8%	82.7%		83.5%	88.4%	83.3%	87.6%		
Self-reported health									
Excellent	38.1%	34.1%	0.015	49.2%	30.8%	36.6%	32.2%		<0.001
Less than excellent	61.9%	65.9%		50.8%	69.2%	63.4%	67.8%		
Insurance coverage									
Insured	90.6%	81.7%	<0.001	94.5%	92.0%	78.5%	91.3%		<0.001
Uninsured	9.4%	18.3%		5.5%	8.0%	21.5%	8.7%		

*continued*

Table 1. Continued

	All Employed Adults			Health Care Industry Only				
	Health Care Industry	All Other Industries	p-value	Health Care Provider	Health Care Technician	Health Care Support	All Other Workers	p-value
Workplace								
Ambulatory care	55.5%	—		43.9%	50.3%	70.9%	60.7%	<0.001
Hospital	44.5%	—		56.1%	49.7%	29.1%	39.3%	
Region								
1 Northeast	20.2%	17.4%	0.146	16.6%	23.4%	17.8%	22.8%	0.487
2 Midwest	25.8%	24.6%		26.5%	25.4%	27.5%	24.9%	
3 South	34.1%	36.1%		36.5%	37.3%	32.6%	31.7%	
4 West	19.9%	22.0%		20.4%	13.9%	22.1%	20.7%	
Sample size								
Unweighted sample	1,280	13,049		394	172	202	512	
Weighted population	11,983,845	130,580,237		3,840,625	1,535,437	1,729,074	4,878,709	

Notes: Demographic data from NHIS Person file and Sample Adult file 2007.

Table 2: Prevalence of Past Year Complementary and Alternative Medicine (CAM) Use by Type, Health Care Employees Compared with All Other Industries, NHIS 2007

	<i>All Employed Adults</i>			<i>Health Care Industry Only</i>				
	<i>Health Care Industry</i>	<i>All Other Industries</i>	<i>p-value</i>	<i>Health Care Provider</i>	<i>Health Care Technician</i>	<i>Health Care Support</i>	<i>All Other Workers</i>	<i>p-value</i>
Alternative medical systems								
Practitioner-based	3.0%	2.0%	0.050	2.9%	3.8%	0.6%	3.7%	0.266
Self-treatment	2.6%	1.9%	0.150	2.5%	2.2%	2.1%	3.1%	0.907
Biologically based therapies								
Practitioner-based	0.3%	0.0%	0.029	0.8%	0.0%	0.0%	0.0%	0.320
Self-treatment	68.9%	56.5%	<0.001	76.6%	66.0%	63.3%	65.8%	0.009
Manipulative body therapies								
Practitioner-based	21.7%	16.6%	<0.001	25.7%	20.7%	14.2%	21.6%	0.047
Mind-body therapies								
Practitioner-based	0.9%	0.3%	0.004	2.1%	0.0%	1.5%	0.1%	0.024
Self-treatment	30.8%	18.3%	<0.001	37.0%	31.8%	19.5%	29.7%	0.008
Energy therapies								
Practitioner-based	1.5%	0.6%	<0.001	2.6%	1.3%	0.0%	1.3%	0.239
Overall CAM use								
Any CAM therapy	75.9%	62.9%	<0.001	83.3%	75.2%	68.1%	73.1%	0.002
excl. diet, vitamins, herbs	41.2%	29.7%	<0.001	48.4%	45.1%	29.5%	38.5%	0.002
Practitioner-based	23.6%	17.7%	<0.001	27.7%	23.8%	15.2%	23.4%	0.035
Self-treatment (excl. diet, vit, herb)	31.7%	19.0%	<0.001	37.8%	32.2%	21.0%	30.4%	0.011

*Notes.* Data from NHIS Sample Adult, Alternative Health Supplement file 2007.

Table 2 shows the prevalence of CAM use by adults employed in health care and in all other industries. Overall, 76 percent of health care workers reported having used at least one of the CAM therapies listed in Table 2 in the past year compared with 63 percent of the general population ( $p < .001$ ). Excluding diets, vitamins and minerals, and herbal supplements, health care workers were still significantly more likely to report having used CAM in the



past year compared with the general population (41 percent versus 30 percent,  $p < .001$ ). Health care workers are also significantly more likely to report using any practitioner-based CAM and to report any self-treatment with CAM in the past year than adults employed in other industries. Among health

Table 3: Odds of Past Year Complementary and Alternative Medicine (CAM) Use for Employed U.S. Adults by Industry

	<i>Any CAM Use</i>			<i>Practitioner-Based CAM</i>			<i>Self-Treatment CAM</i>		
	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>
Industry									
All others	1.0			1.0			1.0		
Health care	1.4	1.1-1.6	0.001	1.2	1.0-1.4	0.096	1.6	1.3-1.9	<0.001
Gender									
Male	1.0			1.0			1.0		
Female	1.8	1.6-1.9	<0.001	1.7	1.6-1.9	<0.001	1.9	1.7-2.1	<0.001
Age group									
18-29years	1.4	1.1-1.8	0.007	1.2	0.9-1.7	0.188	1.5	1.1-2.0	0.005
30-49years	1.5	1.2-1.8	0.001	1.6	1.2-2.1	0.001	1.3	1.0-1.8	0.033
50-64years	1.5	1.2-1.8	0.001	1.4	1.1-1.9	0.014	1.4	1.1-1.8	0.015
65+ years	1.0			1.0			1.0		
Race/ethnicity									
Non-Hispanic white	1.9	1.7-2.2	<0.001	3.0	2.4-3.6	<0.001	1.4	1.2-1.7	<0.001
Non-Hispanic black	1.0			1.0			1.0		
Non-Hispanic other	2.1	1.6-2.7	<0.001	2.7	1.9-3.6	<0.001	1.6	1.2-2.1	<0.001
Hispanic	0.9	0.7-1.1	0.277	1.5	1.1-2.1	0.016	0.6	0.5-0.8	<0.001
Nativity									
Foreign-born	1.0			1.0			1.0		
U.S.-born	1.5	1.3-1.8	<0.001	1.6	1.3-2.0	<0.001	1.4	1.1-1.7	0.001
Health status									
Less than excellent	1.0			1.0			1.0		
Excellent	1.0	0.9-1.1	0.409	1.0	0.9-1.2	0.407	1.1	1.0-1.2	0.078
Insurance coverage									
Uninsured	1.0			1.0			1.0		
Insured	1.2	1.1-1.4	0.004	1.3	1.1-1.6	0.003	1.1	0.9-1.3	0.258
Region									
Northeast	1.0			1.0			1.0		
Midwest	1.0	0.9-1.1	0.890	1.1	0.9-1.3	0.371	0.9	0.8-1.1	0.259
South	0.7	0.6-0.9	0.019	0.8	0.7-1.0	0.013	0.7	0.6-0.8	<0.001
West	1.4	1.2-1.6	<0.001	1.5	1.3-1.8	<0.001	1.3	1.1-1.5	0.001

*Note.* Self-treatment excludes herbs, vitamins, and diet-based therapies.

care workers, we found statistically significant differences by occupational group in use of practitioner-based CAM and self-treatment with CAM in the past year.

Table 3 presents the results of three logistic regression models estimating the odds of CAM use by health care workers compared with employees in all other industries. After adjusting for background characteristics, health care workers had significantly higher odds of any CAM use and self-treatment with CAM compared with employees in other industries. No difference was detected in the use of practitioner-based CAM between health care workers and other workers.

Table 4 displays the results of three logistic regression models estimating the odds of CAM use among only health care workers by workplace and occupational group. Overall, those employed in ambulatory care settings are significantly more likely to have used CAM in the past year compared with those employed in hospitals. When comparing occupational groups, providers, technicians, and other occupations were all significantly more likely to have used any CAM in the past year compared with support workers. Providers had over twice the odds (adjusted OR = 2.2, 95 percent CI = 1.3–3.8) of past year practitioner-based CAM use and nearly three times the odds (adjusted OR = 2.7, 95 percent CI = 1.6–4.5) of self-treatment with CAM compared with support workers. Technicians and other occupations were also significantly more likely to have self-treated with CAM in the past year compared with support occupations.

Finally, we examined the reasons why health care workers used CAM in the past year (data not shown). The most common reason given for CAM use was general wellness (67.8 percent), whereas the least common reason was that traditional medical care was too expensive (3.9 percent). Back, neck, or joint pain were the most commonly reported health conditions for overall CAM use and for practitioner-based CAM use. The most commonly reported condition for CAM self-treatment was anxiety.

## DISCUSSION

This study provides the first population-based description of CAM use by U.S. health care workers. Our analyses reveal that, overall, health care workers are significantly more likely to use CAM therapies, particularly mind-body therapies, than the employed U.S. population. This is not surprising as health care workers, particularly those in ambulatory care settings, are more exposed

Table 4: Odds of Past Year Complementary and Alternative Medicine (CAM) Use for U.S. Health Care Workers by Occupation and Workplace

	<i>Any CAM Use</i>			<i>Practitioner-Based CAM</i>			<i>Self-Treatment CAM</i>		
	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>	<i>OR</i>	<i>95% CI</i>	<i>p-value</i>
Occupation									
Providers	2.6	1.7-4.2	<0.001	2.2	1.3-3.7	0.005	2.7	1.6-4.5	<0.001
Technicians	2.3	1.4-3.8	0.002	1.8	0.9-3.5	0.081	2.0	1.1-3.8	0.026
Health care support	1.0			1.0			1.0		
Non-health workers	1.6	1.0-2.5	0.037	1.6	1.0-2.7	0.074	1.8	1.1-3.0	0.028
Workplace									
Hospital	1.0			1.0			1.0		
Ambulatory	1.7	1.3-2.3	<0.001	1.6	1.1-2.3	0.008	1.5	1.1-2.0	0.008
Gender									
Male	1.0			1.0			1.0		
Female	1.4	1.0-2.1	0.056	1.5	1.0-2.4	0.064	1.4	0.92-2.00	0.119
Age group									
18-29 years	2.4	1.0-5.4	0.044	2.3	0.8-7.2	0.137	2.1	0.85-5.34	0.105
30-49 years	1.9	0.9-4.2	0.103	2.2	0.8-6.2	0.121	1.8	0.76-4.10	0.189
50-64 years	1.7	0.8-4.0	0.192	2.0	0.7-5.9	0.197	1.7	0.70-3.93	0.253
65+ years	1.0			1.0			1.0		
Race/ethnicity									
Non-Hispanic white	1.3	0.9-1.9	0.108	2.7	1.6-4.5	<0.001	1.1	0.74-1.64	0.626
Non-Hispanic black	1.0			1.0			1.0		
Non-Hispanic other	1.7	0.9-3.3	0.094	2.1	1.0-4.5	0.053	1.5	0.79-2.80	0.222
Hispanic	0.8	0.5-1.5	0.506	1.8	0.8-3.8	0.158	0.7	0.40-1.23	0.215
Nativity									
Foreign-born	1.0			1.0			1.0		
U.S.-born	1.5	1.0-2.5	0.077	1.8	1.0-3.4	0.058	1.3	0.81-1.97	0.303
Health status									
Less than excellent	1.0			1.0			1.0		
Excellent	1.0	0.7-1.3	0.782	0.9	0.7-1.3	0.669	1.0	0.70-1.33	0.823
Insurance coverage									
Uninsured	1.0			1.0			1.0		0.435
Insured	1.6	1.0-2.6	0.074	1.9	1.0-3.6	0.047	1.2	0.72-2.17	
Region									
Northeast	1.0			1.0			1.0		
Midwest	1.3	0.8-2.1	0.331	1.0	0.6-1.8	0.898	1.1	0.67-1.69	0.802
South	0.7	0.5-1.2	0.203	0.7	0.4-1.1	0.109	0.6	0.41-1.03	0.069
West	1.4	0.9-2.3	0.157	1.3	0.8-2.2	0.337	1.3	0.82-2.10	0.264

*Note.* Self-treatment excludes herbs, vitamins, and diet-based therapies.

to these methods, and exposure is probably correlated with higher use. Our results are also consistent with findings of previous studies documenting a high prevalence of CAM use in narrowly defined health care worker populations. For example, one study found that 63 percent of nurse practitioners in Connecticut reported personal use of CAM (Hayes and Alexander 2000), whereas another reported 96 percent of critical care nurses across the United States had personal experience with CAM (Lindquist, Tracy, and Savik 2003). Studies of physicians reveal a lower prevalence of personal CAM use. One study reported that 24 percent of physicians in Denver had personally used CAM (Corbin Winslow and Shapiro 2002), whereas another found that 49 percent of primary care clinicians in Kentucky reported personal use of CAM in the past year (Flannery et al. 2006). A high percentage of health professions faculty report CAM use, with 83 percent of primary care faculty at one medical school having ever used CAM (Levine, Weber-Levine, and Mayberry 2003) and 100 percent of nursing faculty in another university having personally used a CAM therapy (Halcon et al. 2003).

The health conditions for which health care workers reported CAM use were similar to those of CAM users in the general population. In this study, the three predominant health conditions leading to CAM in the past year were back, neck, and joint pain. Similarly, Eisenberg et al. (1998) found that having a back problem was the most frequently reported medical condition associated with CAM use in the past year and a recent national survey found the majority of adults who used CAM during the past year reported back, neck, or joint pain (Barnes, Bloom, and Nahin 2008). This may be a reflection, in part, of the fact that chiropractic is now covered by Medicare and many private and public insurance plans (Ernst 2008).

There are several study limitations. First, the health care industry and occupation categories in our analyses are broad. We were limited to the industry sub-types identified in the NHIS data. Moreover, NHIS does not release detailed occupation categories and has combined providers in a single group since 2005. Thus, use of gross health care occupation categories may mask heterogeneity of CAM use within each category. Second, the NHIS alternative health supplement is a periodic addition to the annual survey. A single year of NHIS data results in small group-specific sample sizes inhibiting comprehensive group-specific analyses. Third, in the NHIS, CAM use is self-reported, which depends on respondents' ability to properly identify CAM therapies that have been used; an identification that may be erroneous (Fennell, Liberato, and Zsembik 2009). For example, the high prevalence of vitamin and mineral use is probably due to the inclusion of daily multivitamin

supplementation, not typically considered a CAM therapy. Consequently, we ran our analyses both including and excluding diets, vitamins and minerals, and herbal supplements. Although the prevalence estimates changed, the overall conclusions did not. Finally, we categorized therapies as practitioner-based or self-treatment, but some therapies classified as self-administered may have resulted from a CAM practitioner visit.

Even with these limitations, our results are suggestive of why CAM therapies are increasingly integrated into health care. There is evidence that personal use of CAM by health care workers is related to the provision of, referral for, or general openness to the integration of CAM therapies in health care practices. For example, Tracy et al. (2005) reported a strong correlation between personal use of specific CAM therapies among critical care nurses and the use of those same CAM therapies in practice. Thus, personal use of CAM by health care workers may be a principal determinant in the movement toward “integrative care”—the mainstreaming of CAM with allopathic medicine (Mann, Gaylord, and Norton 2004; Winnick 2005). In addition, in the context of recent federal health reform changes, in 2014 when the health insurance exchanges begin, states may be more ready to license practitioners of various CAM therapies and thus require insurance coverage for CAM. The possibility of such institutionalized changes of CAM's role in health care, as well as the need for a healthy health care workforce, strongly suggests the need for further research to understand the reasons for health care workers' CAM use as well as the possible benefits and risks of such use. CAM use is a significant and growing component of health care and health promotion and as such necessitates the same due diligence in education, training, and research as any other health care practice.

## ACKNOWLEDGMENTS

*Joint Acknowledgment/Disclosure Statement:* Dr. Johnson conceived the study, acquired the data, analyzed and interpreted the data, led the writing of the manuscript, and oversaw all aspects of the study. Dr. Ward contributed to the study design, interpretation of the data, drafting and critically revising the manuscript, review of the literature, and citation management. Ms. Knutson assisted with interpreting the data, critically revised the manuscript, and

approved the final version. Dr. Sendelbach assisted with interpreting the data, critically revised the manuscript, and approved the final version.

*Disclosures:* None.

*Disclaimers:* Publicly available data were obtained from the National Center for Health Statistics (NCHS). Analyses, interpretation, and conclusions are solely those of the authors and do not necessarily reflect the views of the Division of Health Interview Statistics or NCHS.

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## SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Appendix SA1: Author matrix.

Table A1: Classification of CAM Therapies in the NHIS Alternative Health Supplement.

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